



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,845	05/10/2006	Keiko Shibata	648-46078X00	5049
20457 7590 10/14/2008 ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873				
EXAMINER THERKORN, ERNEST G				
ART UNIT		PAPER NUMBER		
1797				
MAIL DATE		DELIVERY MODE		
10/14/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/578,845

**Applicant(s)**

SHIBATA, KEIKO

**Examiner**

Ernest G. Therborn

**Art Unit**

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) 4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date 5/10/06&3/7/07&7/1/08
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Matsushita (Japan Patent No. 56-089058) in view of PTO Translation No. 08-6627 of Matsushita (Japan Patent No. 56-089058) or Takamura (Japan Patent No. 6-94697) in view of PTO Translation No. 08-6644 of Takamura (Japan Patent No. 6-94697) in view of Snyder (Introduction to Modern Liquid Chromatography, John Wiley&Sons, Inc., New York, 1979, pages 662-686) and Overfield (U.S. Patent No. 5,076,909). Matsushita (Japan Patent No. 56-089058) and PTO Translation No. 08-6627 are considered to be a single reference. Takamura (Japan Patent No. 6-94697) and PTO Translation No. 08-6644 are considered to be a single reference. At best, the claims differ from either Matsushita (Japan Patent No. 56-089058) in view of PTO Translation No. 08-6627 of Matsushita (Japan Patent No. 56-089058) or Takamura (Japan Patent No. 6-94697) in view of PTO Translation No. 08-6644 of Takamura (Japan Patent No. 6-94697) in reciting increasing the polarity of the eluents. Snyder (Introduction to Modern Liquid Chromatography, John Wiley&Sons, Inc., New York, 1979, pages 662-686) discloses increasing polarity of the eluents enhances detection sensitivity, improves resolution, and decreases column deterioration. In addition, Snyder (Introduction to Modern Liquid Chromatography, John Wiley&Sons, Inc., New York, 1979, pages 662-686) on page 684 discloses that hexane and dichloromethane

are an eluting pair to increase polarity for liquid solid liquid chromatography. Overfield (U.S. Patent No. 5,076,909) (Abstract, column 8, lines 27-45; and column 12, lines 32-36) discloses changing from a weak solvent to a strong solvent achieves superior separation for heteroaromatics. Overfield (U.S. Patent No. 5,076,909) (column 19, lines 18-51) discloses that use of an alcohol in the solvent used to dissolve the sample maintains the adsorption properties of the stationary phase. It would have been obvious to use increasing polarity in each of Matsushita (Japan Patent No. 56-089058) in view of PTO Translation No. 08-6627 of Matsushita (Japan Patent No. 56-089058) and Takamura (Japan Patent No. 6-94697) in view of PTO Translation No. 08-6644 of Takamura (Japan Patent No. 6-94697) because Snyder (Introduction to Modern Liquid Chromatography, John Wiley&Sons, Inc., New York, 1979, pages 662-686) discloses increasing polarity of the eluents enhances detection sensitivity, improves resolution, and decreases column deterioration and Overfield (U.S. Patent No. 5,076,909) (Abstract, column 8, lines 27-45; and column 12, lines 32-36) discloses changing from a weak solvent to a strong solvent achieves superior separation for heteroaromatics. With regard to claim 2, it would have been obvious to use the specific solvents because Snyder (Introduction to Modern Liquid Chromatography, John Wiley&Sons, Inc., New York, 1979, pages 662-686) on page 684 discloses that hexane and dichloromethane are an eluting pair to increase polarity for liquid solid liquid chromatography and Overfield (U.S. Patent No. 5,076,909) (column 19, lines 18-51) discloses that use of an alcohol in the solvent used to dissolve the sample maintains the adsorption properties of the stationary phase.

The restriction has been reconsidered, deemed proper, and made final for the reasons of record.

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (571) 272-1149. The official fax number is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Ernest G. Therkorn/  
**Ernest G. Therkorn**  
**Primary Examiner**  
**Art Unit 1797**

EGT  
October 10, 2008